IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re patent application of

Heinz HAISER et al. Before the Board of Appeals

Serial No. 10/560,911 Art Unit: 3747

Filed: December 16, 2005 Examiner: K. Coleman

For: CONNECTION FOR HIGH-PRESSURE CHAMBERS OF FUEL INJECTORS

APPELLANT'S BRIEF (37 CFR 41.37)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Date: September 23, 2009

Sir:

This Brief is filed in support of the Notice of Appeal filed on July 23, 2009, appealing the Examiner's decision of making final a rejection of claims 13-19, 21 and 23-37.

The $540 fee for this Appeal Brief and any other required fee should be charged to Deposit Account No. 07-2100 by the attached deposit account form.

I - REAL PARTY IN INTEREST

The real party in interest in this appeal is:

Robert Bosch GmbH

Zentrale Patentabteilung

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II - RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal, there are no such appeals or interferences. None

III - STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN APPLICATION - Twenty-three (23).

Claims in the application are: 13-19, 21 and 23-37.

B. STATUS OF ALL THE CLAIMS

1. Claims canceled: 1-12, 20 and 22
2. Claims withdrawn from consideration but not canceled: None.
3. Claims pending: 13-19, 21 and 23-37.
4. Claims allowed: None.
5. Claims rejected: 13-19, 21 and 23-37.

C. CLAIMS ON APPEAL

The claims on appeal are: 13-19, 21 and 23-37.

IV - STATUS OF AMENDMENTS

A reply to the final rejection was filed on July 23, 2009, containing appellants' arguments, but no amendments to the claims were made. An Advisory Action was mailed on August 18, 2009, indicating that the reply would be entered for purposes of appeal. Thus, the claims on appeal are identical to the claims that were finally rejected.

V - SUMMARY OF CLAIMED SUBJECT MATTER

In the following summary, all references to pages and lines can be found in the original English-language specification filed on December 16, 2005. However, it should be noted that the original English-language specification contained a number of minor errors that were corrected by the preliminary amendment also filed on December 16, 2005. The references to pages and lines in the following summary are intended as examples of where the claim language may be found in the specification and are not intended to be exclusive.

Independent claim 13 is directed to an improvement in the construction of a pressure amplifier in a fuel injection system (p. 1, ll. 3-11) and more particularly to an improvement in the connection point of a bore (12) to a differential pressure chamber (4) of the pressure amplifier (1) (p. 4, l. 17 through p. 5, l. 3), the pressure amplifier having a body (11) with an interior chamber, and a piston (3) within the body, which piston separates the chamber of the body into a work chamber (2), a compression chamber (5) and the differential pressure chamber (4) (Figs. 1 and 2), wherein the differential pressure chamber (4) is subjected to the high pressure of a high-pressure injection system for fuel or relieved of such pressure (p. 8, ll. 1-2), and the bore (12) extends through the body (p. 9, ll. 4-5), the improvement comprising a cylindrically shaped pocket (19) or an encompassing groove (18) in the differential pressure chamber (p. 10, ll. 1-3), the bore discharging into the cylindrical shaped pocket or the encompassing groove thus forming an intersection point (p. 4, l. 17 through p. 5, l. 8), wherein the bore (12) forms a control line that subjects the differential pressure chamber to the high pressure of the fuel system or relieves it of said pressure by connecting it to a valve which thus actuates the pressure amplifier (p. 4, ll. 13-17).

Independent claim 25 is directed to an improvement in the connection point of a cylindrical chamber (4) subjected to high pressure in a body (11) subjected to high pressure of a high-pressure injection system, with a bore (12) extending through the body, the improvement comprising a cylindrically shaped pocket (19) or an encompassing groove (18) in the cylindrical wall of the cylindrical chamber (4) of the body (p. 4, l. 17 through p. 5, l. 8), the bore (12) discharging into the cylindrical shaped pocket or the encompassing groove and thus forming an intersection point within the cylindrical shaped pocket or the encompassing groove.

Independent claim 37 is directed to a high-pressure fuel injection system having a pressure amplifier (1) (p. 1, ll. 3-11) that includes a body (11) and a differential pressure chamber (4), the differential pressure chamber being connected to a bore (12) which extends through the body and connects to a valve, the improvement comprising a cylindrically shaped pocket (19) or an encompassing groove (18) in a cylindrical wall of the differential pressure chamber (p. 4, l. 17 through p. 5, l. 8), and that the bore discharges into the cylindrical shaped pocket or the encompassing groove thus forming an intersection point so that the valve, via its connection to the bore and thus to the differential pressure chamber subjects the differential pressure chamber to pressure or relieves it of pressure and thus actuates the pressure amplifier.

VI - GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 13, 14, 23-27 and 29-37 stand rejected under 35 U.S.C. 102(b) as anticipated by Bessiere (US 2,947,258).

At page 5 of the Final Rejection, the examiner explains how claim 21 is anticipated by Bessiere. Thus, appellants understand that claim 21 also stands rejected under 35 U.S.C. 102(b) as anticipated by Bessiere (US 2,947,258).

Claim 15-19, 27 and 28 stand rejected under 35 U.S.C. 103(a) as unpatentable over Bessiere (US 2,947,258).

VII - ARGUMENTS

The rejection of claims 13, 14, 21, 23-27 and 29-37 under 35 U.S.C. 102(b) as anticipated by Bessiere

Arguments applicable to claims 13, 14, 21, 23, 24 and 37

Bessiere teaches a self-regulating reciprocating action pump intended to feed fuel to the injector or injectors of an internal combustion engine. Col. 1, l. 71 through col. 2, l. 3. An object of the disclosed invention is to make sure that the engine never runs above a predetermined upper speed limit. Col. 4, ll. 40-42.

The pump includes a main cylinder 1 cooperating with a main piston 2 driven by the shaft of the internal combustion engine. Col. 2, ll. 4-6.

The pump further includes an auxiliary piston or shuttle 5 movable in an auxiliary cylinder 6 and dividing this cylinder into two chambers 6a and 6b. Col. 2, ll. 11-14.

At col. 3, ll. 54-71, Bessiere explains the operation of the pump as follows:

> The main pump piston 2, moving upwardly, first closes the outlet 3 of feed conduit 4. Then, it causes slide valve 22 to move upwardly so that this slide valve closes conduit 11 and simultaneously places the two above mentioned portions of conduit 23 in communication with each other through space 23a. Consequently, fuel is delivered into the chamber 6a.of cylinder 6 and causes shuttle 5 to move upwardly in said cylinder until it opens the discharge conduit 8. The upward movement of shuttle 5 simultaneously causes the fuel present in chamber 6b to flow through delivery conduit 9 toward the injector or injectors of the engine. As soon as piston 2 starts on its next downward stroke, slide valve 22 drops back upon the abutment constituted either by shoulder 23b or by rod 26, and shuttle 5, moving down in cylinder 6 under the action of return spring 7, causes fuel to be transferred from chamber 6a through outflow conduit 11 to chamber 6b.

In rejecting claims 13 and 37, the examiner finds that Bessiere teaches "a connection point (11, Col. 4, Line 10) of bore (6) to a differential pressure chamber (6, Col. 3, Line 60) of a pressure amplifier (12), the pressure amplifier having a body with an interior chamber, and a piston within the body, which piston separates the chamber of the body into a work chamber (2), a compression chamber (5) and the differential pressure chamber (4), wherein the, which differential pressure chamber is subjected to the high pressure (i.e. fuel injection pump, See Figure 1 and Col. 1, Lines 50-52) of a high-pressure injection system for fuel (via delivery conduit 9, Col. 2, Line 21) at a bore (opening 6a connected to conduit 23 and conduit 11), the bore extending through the body (i.e. fuel injection pump, via conduit 23 and 11, See Figure 1), the improvement comprising an encompassing groove (step near 6a) in the differential pressure chamber (6, See Figure 1), the bore (opening 6a connected to 23 and 11) discharging into the encompassing groove (step near 6a, See Col. 3, Lines 54-65) thus forming an intersection point (6a, See Figure 1), wherein the bore forms a control line (11 and opening 6a connected to 23 and 11) that subjects the differential pressure chamber (6) to pressure." Final Rejection, pp. 2-3 (underlining omitted).

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros.* v. *Union Oil Co. of California,* 814 F.2d 628,631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987), *cert. denied,* 484 U.S. 827 (1987). Analysis of whether a claim is patentable over the prior art under 35 U.S.C. § 102 begins with a determination of the scope of the claim. The scope of the claims in patent applications is determined not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction in light of the

specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004). The properly interpreted claim must then be compared with the prior art.

One of the issues in this appeal centers around the proper interpretation of the language "a pressure amplifier" (claims 13 and 37) and "a differential pressure chamber" (claims 13 and 37).

In paragraph 2 of the appellants' specification, appellants' describe the field of their endeavor, namely, the field of fuel injection systems for internal combustion engines. Appellants acknowledge that for introducing fuel into direct-injection internal combustion engines, stroke-controlled injection systems with a high-pressure reservoir (common rail) are used, that in fuel injection systems with a common rail, the injection pressure can advantageously be adapted to the load and rpm of an engine over wide operating ranges, that to reduce emissions and to attain a high specific performance, a high injection pressure is necessary, and that the attainable pressure level in high-pressure fuel pumps is limited for reasons of strength, so that to further increase the pressure in fuel injection systems, pressure amplifiers in the fuel injectors are employed. In paragraphs 4-6, a number of German Patent Disclosures relating to fuel injection systems for internal combustion engines having pressure amplifiers (sometime referred to in the art as "pressure boosters") are discussed.

Each of independent claims 13 and 37 require a pressure amplifier and specific pressure amplifier structure, for example, a body having a differential pressure chamber and a bore connecting to a valve and connected to the differential pressure chamber at an

intersection point, the valve subjecting the differential pressure chamber to pressure or relieves it of pressure and thus actuates the pressure amplifier.

The examiner finds that Bessiere teaches a "pressure amplifier" at element 12. However, element 12 in Bessiere is actually a "throttle valve" or a "slide valve" (col. 2, ll. 44 and 46). The slide valve 12 in Bessiere does not have a body having a differential pressure chamber and a bore connected to the differential pressure chamber at an intersection point.

As best understood, the examiner actually reads the language "pressure amplifier" on the device shown in Fig. 1 of Bessiere, the language "work chamber" on the cylinder 2 of Bessiere, the language "differential pressure chamber" on the chamber 6a of Bessiere and the language "compression chamber" on the chamber 6b of Bessiere. These are fundamental errors of claim construction on the part of the examiner.

As previously noted, the scope of the claims in patent applications is determined not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art. The properly interpreted claim must then be compared with the prior art.

In rejecting the claims, the examiner has completely ignored the underlying specification and has failed to appreciate how one of ordinary skill in the art would interpret the language "pressure amplifier" and "differential pressure chamber." As a result, the examiner has given an unreasonably broad interpretation to the language "pressure amplifier" and "differential pressure chamber."

A "pressure amplifier" is a **term of art** which in the field of appellants' endeavor has come to mean a structure which, by means of one or more pistons in one or more chambers,

accepts an input fluid already under pressure and amplifies the pressure of that input fluid to a higher output pressure. The language "pressure amplifier" is, thus, more than a mechanical pump, which is all that is taught by Bessiere.

The language "differential pressure chamber" is also a **term of art** which in the field of appellants' endeavor has come to mean that chamber of a "pressure amplifier" which is alternately connected to a source of high-pressure (to activate the pressure amplifier - see appellants' Fig. 2) or to low-pressure (to return the pressure amplifier to its initial position - see appellants' Fig. 1).

The Board's attention is directed to the fact that nowhere in Bessiere is there a teaching that the fuel in chamber 6b which is discharged via outlet 9 to the injectors is at a higher pressure than the fuel in chamber 6a or cylinder 2. Thus, no one of ordinary skill in the field of appellants' endeavor would have interpreted the pump taught by Bessiere as a "pressure amplifier" or the chamber 6a as a "differential pressure chamber."

Hence, Bessiere cannot be said to anticipate any of claim 13, 14, 21, 23, 24 and 37.

Arguments applicable to claims 13, 21 and 23

Claim 13 is directed to a pressure amplifier having:

a body with an interior chamber, a piston within the body, which piston separates the chamber of the body into a work chamber, a compression chamber and a differential pressure chamber,

a bore forming a control line that extends through the body and subjects the differential pressure chamber to the high pressure of the fuel system or relieves it of said pressure by connecting it to a valve which thus actuates the pressure amplifier, and

a cylindrically shaped pocket or an encompassing groove in the differential pressure chamber, the bore discharging into the cylindrical shaped pocket or the encompassing groove thus forming an intersection point.

Assuming for the moment that Bessiere actually teaches a "pressure amplifier," Bessiere does not teach a "pressure amplifier" having a body with an interior chamber and a piston within the body, which piston separates **the chamber** of the body into three different chambers, namely, (1) a work chamber, (2) a compression chamber and (3) a differential pressure chamber as required by the language of claim 13.

In Bessiere, the piston 5 separates the chamber 6 into two chambers, namely, chambers 6a and 6b, not three chambers as required by the language of claim 13.

For this additional reason, Bessiere cannot be said to anticipate any of claims 13, 21 and 23.

Arguments applicable to claims 21 and 33

Claim 21 depends from claim 13. Claim 33 depends from claims 25 and 30. Each of claims 21 and 33 further requires that the connection point be embodied as an opening of oval or rectangular geometry.

In Bessiere, the shape of the "connection point" of the conduit 23 with the chamber 6a appears to be a round hole.

At paragraph 11 of the specification, the appellants teach that:

> [b]y means of suitable shaping of the groove or of the cylindrically shaped pocket, specific shapes of the opening can thus be achieved that are geometrically oval, rectangular, or otherwise-shaped. By means of a defined shape of the opening, the stresses in the region of the high-pressure intersection point between the groove and the control line embodied as a bore, or

> between the cylindrically shaped pocket and the control line embodied as a bore, can be varied in a purposeful way and additional reduced still further. With connection points embodied in this way in the high-pressure region between high-pressure chambers of components that are exposed to extreme pressures, on the one hand, over the long term, the service lives of fuel injectors with pressure amplifiers can be shortened because of the lower stress level; on the other hand, by means of the connection proposed according to the invention of high-pressure chambers of components carrying extremely high pressure, it is possible to increase the injection pressure amplifier in fuel injectors still further.

There is certainly no teaching or suggestion in Bessiere that the particular shape of the "connection point" between the conduit 23 and the chamber 6a can extend the life of fuel injectors. Thus, Bessiere clearly does not teach that which is claimed in claims 21 and 33.

For this additional reason, claims 21 and 33 are not anticipated by Bessiere.

Arguments applicable to claims 14, 24-27 and 29-37

Independent claim 25 requires a body subjected to the high pressure of a high-pressure injection system, a cylindrical chamber subjected to the high pressure in the body, a bore extending through the body, a connection point of the cylinder chamber with the bore, and a cylindrically shaped pocket or an encompassing groove in the cylindrical wall of the cylindrical chamber of the body, the bore discharging into the cylindrical shaped pocket or the encompassing groove and thus forming an intersection point within the cylindrical shaped pocket or the encompassing groove. Likewise, independent claim 37 requires "a cylindrically shaped pocket or an encompassing groove in a cylindrical wall of the differential pressure chamber."

At pages 3 and 4, the examiner explains the rejection of claim 25 as follows:

> With regards to claim 25, the patent to Bessiere discloses a connection point (11) of a cylindrical chamber (6) subjected to high pressure in a body subjected to high pressure of a high-pressure injection system (i.e. fuel injection pump, See Figure 1), a bore (6a), extending through the body (i.e. fuel injection pump, via conduit 23 and 11), the improvement comprising an encompassing groove (step near 6a) in the cylindrical wall of the cylindrical chamber of the body (See Figure 1), the bore discharging into the encompassing groove (6a) and thus forming an intersection point within the encompassing groove (6a).

A proper understanding of Bessiere reveals that Bessiere discloses an auxiliary chamber 6 divided by piston 5 into two chambers 6a (below the piston 5 with reference to Fig. 1) and 6b (above the piston 5 with reference to Fig. 1). As illustrated in Fig. 1, chamber 6a is a stepped-chamber having two sections, one section being the approximate diameter of the piston 5 and the other section being of a smaller diameter than the diameter of the piston such that a ledge is formed between the two sections of chamber 6a, the ledge forming a lower stop for the piston, that is, the piston 5 is biased by the spring 7 against the ledge.

As appellants understand the rejection, it is the examiner's position that the claimed "cylindrically shaped pocket or an encompassing groove **in the cylindrical wall of the cylindrical chamber of the body**" is being read on the section of chamber 6a having the smaller diameter.

It is pointed out to the Board that the walls which define the section of chamber 6a having the smaller diameter is also a part of "the cylindrical wall of the cylindrical chamber of the body." Therefore, the walls which define the section of chamber 6a having the smaller diameter cannot also be the cylindrically shaped pocket or an encompassing groove required

by claim 25. To put it another way, **the cylindrical wall of the cylindrical chamber of the body** cannot also be the cylindrically shaped pocket or an encompassing groove, because the cylindrically shaped pocket or an encompassing groove must be **in** the cylindrical wall of the cylindrical chamber of the body.

Because Bessiere fails to show all of the elements recited in independent claims 25 and 37, including a cylindrically shaped pocket or an encompassing groove in the cylindrical wall of the cylindrical chamber of the body, Bessiere cannot be said to anticipate claim 25 or any of claims 26, 27 and 29-36, dependent on claim 25 or claim 37 or any of claims 14 and 24, dependent on claim 37.

The rejection of claims 15-19, 27 and 28 under 35 U.S.C. 103(a) as unpatentable over Bessiere

Argument applicable to claims 15 and 17-19

Claims 15 and 17-19 are dependent on claim 37 and, thus, each of these claims requires a pressure amplifier and specific pressure amplifier structure, for example, a body having a differential pressure chamber and a bore connected to the differential pressure chamber at an intersection point, the bore connecting to a valve for actuating the pressure amplifier.

For the reasons previously set forth with respect to claim 37, Bessiere does not teach a pressure amplifier having a body with a differential pressure chamber and a bore connected to the differential pressure chamber at an intersection point. Without a secondary reference

teaching these elements, there is simply no factual basis for concluding that claims 15 and 17-19 are obvious based on the teachings of Bessiere alone.

Argument applicable to claim 16

Claim 16 is dependent on claim 13. For the reasons previously set forth with respect to the rejection of claim 13, Bessiere does not teach a "pressure amplifier and most certainly does not teach a "pressure amplifier" having a body with an interior chamber and a piston within the body, which piston separates the chamber of the body into three different chamber, namely, (1) a work chamber, (2) a compression chamber and (3) a differential pressure chamber as required by the language of claim 13.

In Bessiere, the piston 5 separates the chamber 6 into two chambers, namely, chambers 6a and 6b, not three chambers as required by the language of claim 13. Thus, without a secondary reference teaching these elements, there is simply no factual basis for concluding that claim 16 is obvious based on the teachings of Bessiere.

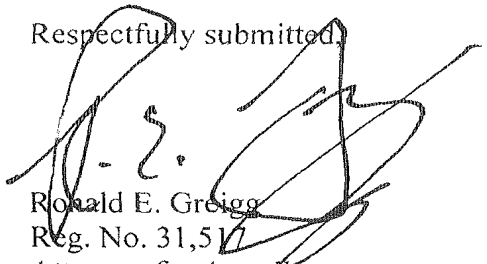
Argument applicable to claims 15, 17-19, 27 and 28

Like claims 25 and 37, claims 15, 17-19, 27 and 28 require the cylindrically shaped pocket or the encompassing groove to be in the cylindrical wall of the cylindrical chamber of the body. As explained with respect to the rejection of claims 25 and 37, Bessiere lacks any teaching that the cylindrically shaped pocket or the encompassing groove is in the cylindrical wall of the cylindrical chamber of the body. Thus, without a secondary reference teaching these claimed features, there is simply no factual basis for concluding that claims 15, 17-19, 27 and 28 are obvious based on the teachings of Bessiere alone.

Conclusion

For the reasons stated above, the appellants request that the Examiner's rejections of the claims be reversed.

Respectfully submitted,



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VIII - CLAIMS APPENDIX

Claims 1-12. **(Canceled)**

13. **(Rejected)** In a connection point of a bore to a differential pressure chamber of a pressure amplifier, the pressure amplifier having a body with an interior chamber, and a piston within the body, which piston separates the chamber of the body into a work chamber (2), a compression chamber (5) and the differential pressure chamber (4), wherein the differential pressure chamber is subjected to the high pressure of a high-pressure injection system for fuel or relieved of such pressure, and the bore extends through the body, the improvement comprising a cylindrically shaped pocket or an encompassing groove in the differential pressure chamber, the bore discharging into the cylindrical shaped pocket or the encompassing groove thus forming an intersection point, wherein the bore forms a control line that subjects the differential pressure chamber to the high pressure of the fuel system or relieves it of said pressure by connecting it to a valve which thus actuates the pressure amplifier.

14. **(Rejected)** The improvement according to claim 37, wherein the cylindrically shaped pocket or the encompassing groove is preferably disposed in the bottom region of the differential pressure chamber subjected to high pressure.

15. **(Rejected)** The improvement according to claim 37, wherein the cylindrically shaped pocket or the encompassing groove forms an intersection with the bore that is free of excessively elevated stress.

16. **(Rejected)** The connection point according to claim 13, wherein the intersection point acts as a notch effect point, at which reduced stress levels $\sigma_{max,2}$, $\sigma_{max,3}$ are established in operation of the body subjected to high pressure.

17. **(Rejected)** The improvement according to claim 37, wherein the cylindrically shaped pocket or the encompassing groove is an encompassing groove which is embodied with a curved or angular contour at a constant depth in the body.

18. **(Rejected)** The improvement according to claim 37, wherein the cylindrically shaped pocket or the encompassing groove is a cylindrically shaped pocket which is embodied as semicircular, curved, or angular in the cylindrical wall that defines the chamber.

19. **(Rejected)** The improvement according to claim 18, wherein the cylindrically shaped pocket has its maximum depth at the orifice of the bore.

Claim 20. **(Canceled)**

21. **(Rejected)** The connection point according to claim 13, wherein the connection point is embodied, depending on the shape of the groove, as an opening of oval or rectangular geometry.

Claim 22. **(Canceled)**

23. **(Rejected)** The connection point according to claim 13, wherein the control line is embodied as a through bore in the high-pressure-carrying body.

24. **(Rejected)** The improvement according to claim 37, further comprising at least one further bore connected to the cylindrically shaped pocket or the encompassing groove in the high-pressure-carrying body.

25. **(Rejected)** In a connection point of a cylindrical chamber subjected to high pressure in a body subjected to high pressure of a high-pressure injection system, with a bore extending through the body, the improvement comprising a cylindrically shaped pocket or an encompassing groove in the cylindrical wall of the cylindrical chamber of the body, the bore discharging into the cylindrical shaped pocket or the encompassing groove and thus forming an intersection point within the cylindrical shaped pocket or the encompassing groove.

26. **(Rejected)** The connection point according to claim 25, wherein the cylindrically shaped pocket or the encompassing groove is preferably disposed in the bottom region of the cylindrical wall of the cylindrical chamber.

27. **(Rejected)** The connection point according to claim 25, wherein the cylindrically shaped pocket or the encompassing groove forms an intersection with the bore that is free of excessively elevated stress.

28. **(Rejected)** The connection point according to claim 25, wherein the intersection point acts as a notch effect point, at which reduced stress levels $\sigma_{max,2}$, $\sigma_{max,3}$ are established in operation of the body subjected to high pressure.

29. **(Rejected)** The connection point according to claim 25, wherein the cylindrically shaped pocket or the encompassing groove is an encompassing groove which is embodied with a curved or angular contour at a constant depth in the body.

30. **(Rejected)** The connection point according to claim 25, wherein the cylindrically shaped pocket or the encompassing groove is a cylindrically shaped pocket which is embodied as semicircular, curved, or angular in the cylindrical wall that defines the chamber.

31. **(Rejected)** The connection point according to claim 30, wherein the cylindrically shaped pocket has its maximum depth at the orifice of the bore.

32. **(Rejected)** The connection point according to claim 30, wherein the cylindrically shaped pocket, on both sides of the orifice of the bore, has symmetrical ending regions into the bore.

33. **(Rejected)** The connection point according to claim 25, wherein the connection point is embodied, depending on the shape of the groove, as an opening of oval or rectangular geometry.

34. **(Rejected)** The connection point according to claim 25, defined by the intersection of a differential pressure chamber, controlling a pressure amplifier, and a control line in the form of a bore that subjects the differential pressure chamber to pressure or relieves it of pressure and that leads to a valve that actuates the pressure amplifier.

35. **(Rejected)** The connection point according to claim 25, wherein the control line is embodied as a through bore in the high-pressure-carrying body.

36. **(Rejected)** The connection point according to claim 25, further comprising at least one further bore connected to the encompassing groove or the encompassing groove in the high-pressure-carrying body.

37. **(Rejected)** In a high-pressure fuel injection system having a pressure amplifier that includes a body and a differential pressure chamber, the differential pressure chamber being connected to a bore which extends through the body and connects to a valve, the

improvement comprising a cylindrically shaped pocket or an encompassing groove in a cylindrical wall of the differential pressure chamber, and that the bore discharges into the cylindrical shaped pocket or the encompassing groove thus forming an intersection point so that the valve, via its connection to the bore and thus to the differential pressure chamber subjects the differential pressure chamber to pressure or relieves it of pressure and thus actuates the pressure amplifier.

IX - EVIDENCE APPENDIX

None

X - RELATED PROCEEDINGS APPENDIX

None